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Long-Term Fiscal Risks and Sustainability in an Oil-Rich Country

The Case of Russia

Zeljko Bogetic
Karlis Smits
Nina Budina
Sweder van Wijnbergen

The World Bank
Europe and Central Asia Region
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Abstract

Russia entered the global crisis with strong fiscal position, low public debt, and large fiscal and monetary reserves, which helped it cushion the crisis shocks. But the rise in the non-oil fiscal deficit in 2007–08 and, more importantly, the massive impact of the global crisis in late 2008 and 2009 have dramatically altered Russia's medium-term and long-term economic and fiscal outlook. While Russia is emerging from this crisis on a much stronger footing than during the 1998–09 crisis thanks to its strong-pre crisis fundamentals, large fiscal reserves and solid management of the crisis, it will nevertheless need to implement sustained fiscal adjustment in the coming years. Both revenue and expenditure measures will be needed. This will require 2-3 percentage points of GDP in fiscal adjustment for about five years in addition to keeping total expenditure levels at a relatively low 31.5 percent of GDP, consistent with long-term social expenditure needs and requirements of long-term fiscal sustainability. Following a period of adjustment, if Russia would restrain its long-term non-oil deficits to the permanent income (PI) equivalent of its oil revenues as proposed in this paper, its fiscal policy will return to long-term sustainable path. The long-term, sustainable level of non-oil fiscal deficit is estimated at about 4.3 percent of GDP. With the 2009 actual non-oil fiscal deficit of about 14 percent of GDP, this implies significant and sustained fiscal adjustment over the medium term. The expenditure needs of the social security system as well as a reduction in key non-oil taxes represent a major fiscal risk to all scenarios.

This paper—a product of the Poverty Reduction & Economic Management Sector Department, Europe and Central Asia Region—is part of a larger effort in the department to study the long-term fiscal risks and fiscal sustainability in oil-rich countries, especially in Russia. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org.
The author may be contacted at zbogetic@worldbank.org.

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*/ This is the concluding paper of a larger World Bank's study of Russia's Long-Term Fiscal Policy consisting of a series of just-in-time notes, papers and workshop presentations, prepared and delivered for the Ministry of Finance during January 2008-2009. The Study was managed by Zeljko Bogetic, Lead Economist and PREM Country Sector Coordinator for Russia at the World Bank. The authors of this paper are Zeljko Bogetic (Lead Economist), Karlis Smits (Economist), Nina Budina (Senior Economist) and Sweder van Wijnbergen (Consultant). The paper is methodologically based on a preliminary draft paper by Sweder van Wijnbergen and Nina Budina in early 2008 based on an earlier macroeconomic and long-term economic outlook before the onset of the global crisis. This updated paper uses the World Bank's standard fiscal sustainability framework and includes latest macroeconomic information and projections that cover the period of the global crisis in 2008-09. The authors are grateful to Sergey Ulatov and Olga Emelyanova for their extensive data and research assistance support. Helpful discussions with Henning Bohn, Evsey Gurvich, and Asad Alam are gratefully acknowledged. Comments are welcome and could be sent to the task manager of the study: zbogetic@worldbank.org.

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I. Framing the problem

This paper elaborates a few simple ideas as it considers consequences of major fiscal risks for Russia's long-term fiscal outlook and sustainability. First, Russia's oil revenues are uncertain and volatile. Second, public expenditure pressures that Russia is facing are certain and sizeable. And third, with Russia's budget, exports and the structure of its economy highly dependent on the oil and gas sector, large shocks and volatility will continue to define Russia's economic environment.

Russia's strong pre-crisis public finances have deteriorated because of massive oil price, growth, revenue, and expenditure shocks during the global crisis. The oil price has collapsed from over $140 per barrel in mid-2008 to $40-50 range in early 2009 before recovering somewhat to $50-60 in the second quarter 2009 and then to $70 range in the fall 2009. The oil shock was compounded by large capital outflows and sharp tightening of external financing conditions. As a result, domestic liquidity dried up and output plummeted. The severity of the crisis was such that it fundamentally altered the medium-term growth path of the Russian economy compared to the one expected before the crisis.

Taking into account the 7.9 percent decline in real GDP in 2009, the Russian economy is now expected to reach pre-crisis size only towards the end of 2012. With the collapse of oil prices, oil revenue base has shrunk dramatically, non-oil revenues declined with economic activity while social expenditure pressures increased. As a result, federal budget balance has swung from a surplus of 4 percent of GDP in 2008 to a deficit of over 6 percent in 2009 with deficits likely to persist in medium term. In this environment, the government has shifted its policy of no borrowing to modest amounts of domestic and external borrowing in 2010-11 to supplement the drawdown of resources from its fiscal Reserve Fund.

The global crisis and structural vulnerabilities of Russia's budget raise fundamental questions for fiscal policy. How can Russian government sustain a prolonged period of this difficult fiscal and external environment? What would be the likely impact of the economic crisis on medium- and long-term fiscal sustainability? What are the fiscal deficit implications of various sustainability scenarios and what does it imply for the scale and speed of fiscal adjustment? How should fiscal policy be implemented to minimize the risks of such shocks and maintain prudent fiscal stance over the long term?

Finally, does Russia's current fiscal policy stance guarantee sustainability in the long-term or additional fiscal rules may be needed?

The paper ponders these questions at a time when Russia faces a balancing act of limiting the much larger-than-anticipated economic and social impact of the crisis while controlling public finances and supporting economic recovery. This paper aims to provide a contribution to the current fiscal policy debate in Russia. It has also informed the discussions in the Ministry of Finance about the 2010-12 budget.

II. Questions asked

The macroeconomics of fiscal policy in Russia has long been dominated by oil. Oil is the main export earner and the largest source of government revenues. The macroeconomic issues related to oil are twofold. The first set of questions concerns oil revenues and expenditures directly: how to allocate oil revenues over spending today and spending tomorrow in order to maintain sustainable fiscal policy over the long term. The second group of problems concerns the macroeconomic consequences of spending out of oil wealth for any given intertemporal allocation of spending the oil wealth. In this paper, we largely focus on the first set of questions, although the analysis touches on the latter. Moreover, we ask how long-term public expenditure pressures for additional social spending arising from changing demography of the Russian population are likely to affect its long-term fiscal position.

How much should Russia spend every year, given the likely, gradually declining path of oil revenues in the medium term? All oil rich countries face this question, and Russia is no exception. While Russia's oil and gas reserves are expected to last well into this century, this question is less directly associated with the amount of oil and gas reserves as it is in other countries where such reserves are expected to last much less (e.g., Azerbaijan).

In Russia, price uncertainty is a more important problem: historically prices have tended to return to a relatively stable band of circa 25 ~ 35 dollars (in constant 2006 prices) after prolonged periods of high volatility and high (or low) prices, though there are now indications that long-term oil prices are likely to trend higher. The pre-crisis boom has ended and prices have come down significantly, to the $40-60 range and given the sluggish global growth outlook they are unlikely to return to the lofty levels before global crisis. In this environment, in deciding what level of expenditure out of oil revenues is sustainable and equitable in relation to future generations, a certain degree of conservatism is therefore advisable: guessing that oil prices will remain high while prices drop to low level will cause major macroeconomic adjustment problems. But guessing that prices will be low while they turn out high has much more pleasant consequences, which has been the case so far: an unexpected surplus and a decision how to allocate additional revenues to expenditure programs. The latter "guessing strategy" about oil prices—an important choice for fiscal policy--means that benefits of high oil prices in terms of productive spending are somewhat delayed but will typically lead to more conservative spending patterns and lower risk of a "Dutch disease" in response to high oil revenue inflows.

But in addition to expenditure level, the composition of expenditure also matters. This is especially important in countries like Russia, where large public investment needs persist and oil money offers a major source of financing such needs. In a way, this means transferring one asset from underground (oil wealth) into another on the ground (public infrastructure). However large increases in public infrastructure spending run the risk of waste and corruption, thereby wasting the oil wealth for the benefit of few with the power to "capture" oil rents and its distribution. Also, infrastructure projects are lumpy and once underway, even when clear failures, they are often long-lasting and very expensive to slow down or stop. Thus, the welcome shift towards public investments to meet a country's legitimate infrastructure needs also introduces inflexibility in government expenditures as a larger share of expenditures gets tied up in costly projects with long gestation period. This raises the issue of the quality of project appraisal and selection and project implementation to avoid the "white elephant" public projects that provide no economic benefits but carry massive public costs.

The second group of problems deals with the macroeconomic consequences of the revenue flows and the spending patterns decided upon. Two stand out: first the exchange rate consequences of spending out of oil revenues; and two the issue of volatility. To begin with the second, oil revenues are highly volatile, even when quantities are relatively easy to predict, because price volatility is high. This makes oil revenue a highly uncertain source of income even when production levels are relatively stable.

In many countries, increased oil income has translated almost one-for-one into increased public expenditure, and often even more than one-for-one[1]. High future oil income facilitates capital market access, which in turn explains why many oil economies, in fact, substantially increased their debt levels, their higher income notwithstanding. As a consequence, many oil-rich countries have ended up in debt crises once prices unexpectedly declined.

III. The global crisis: A new challenge for fiscal policy

Over the past 9 years before the economic crisis (1999-2008), Russia's fiscal policy has been prudently conservative, providing a buffer from deeper consequences of the current economic crisis. After a decade of high growth, the Russian economy is experiencing a major recession in the wake of the global financial crisis. While Russia's strong short-term macroeconomic fundamentals make it better prepared than many emerging economies to deal with the crisis, its underlying structural weaknesses and high dependence on the price of a single commodity make its impact more pronounced than otherwise. As a result, Russia's real GDP contracted in 2009 by 7.9 percent, compared with the positive 5.6 percent growth in 2008. The fiscal surplus from last year turned into a sizable deficit.

While reserve fund has so far served Russia very well, the question arises about the future. In this paper, we show that for Russia's fiscal policy to be effective on a

[1] see for example Budina and van Wijnbergen (2007) for an extreme example.

permanent basis, such current fiscal allocation rule for the reserve fund and future generations fund could usefully be complemented by an ***additional rule for non-oil primary fiscal deficit***. The World Bank's Fiscal Sustainability Analysis tool (FSA) presented in the annex is designed to analyze the interaction between these two rules (oil fund allocation rule and non-oil primary deficit rule).

The other macro issue--exchange rate management in oil-rich countries--has attracted considerable research and policy attention. The first observation is that high spending unavoidably falls to a large extent on goods and services where international trade offers only an imperfect substitute, or none at all, such as construction. This, in turn, implies that high spending inevitably puts upward pressure on the prices of those goods and services, with a real appreciation as a result. For given expenditure levels, therefore, the authorities have no choice on the real exchange rate consequences, only on *how* they come about. This depends in large part on the nature of the monetary-exchange regime. One option is a gradual revaluation of the nominal exchange rate, so as to effect the required real appreciation. If that option is not chosen, domestic goods end up underpriced given the state of demand for them, and high inflation will result, the other way of effecting a real appreciation. It is important to realize that such inflationary pressures are essentially fiscal in nature, related to expansionary fiscal policy; monetary tightening will mostly not be an appropriate response in this environment.

Real appreciation, unavoidable or not, always raises the issue of competitiveness and the survival of traditional manufacturing industries. Key is to point out that such diversification concerns are appropriate only when the appreciation is expected to be temporary. But in countries like Russia, where oil income is likely to last for a century or more, a real appreciation in line with increased but sustainable expenditure levels does not call for specific support to industries in traded sectors; that will only result in open ended subsidy programs which in fact, when having any effect, will lead to further pressure on the real exchange rate.

In this paper we argue that:

In the long-term:

(1) The *permanent income* (PI) approach to spending out of oil wealth provides a long-term solution to the problems mentioned.

(2) By choosing a spending level that can be maintained indefinitely in real terms (which is what the PI approach amounts to), future generations share in the oil wealth.

(3) A constant level of spending (in real terms) greatly reduces the volatility of government expenditure, thereby reducing the problems created by the volatility of oil revenues.

(4) Since at the PI level spending can be maintained forever, there is no such thing as the post-oil economy; oil income is saved initially and its spending is spread out over the entire future period, in perpetuity.

In the short- to medium-term:

(5) The global crisis has dramatically altered the short- and medium-term fiscal outlook, by pushing the federal fiscal balance from a surplus of 4 percent to a deficit of over 6 percent of GDP, hence requiring significant fiscal adjustment beginning in 2010 for fiscal balance to return to sustainable levels.

(6) Fiscal adjustment required is likely to be sizeable and sustained over several years; it will require both revenue and expenditure measures and a shift in the past policy of no borrowing.

(7) Expanding the non-oil revenue base will be key to improving structure and the stability of fiscal revenues.

(8) Improving the composition and effectiveness of public expenditures will both be needed in order to sustain required fiscal adjustment.

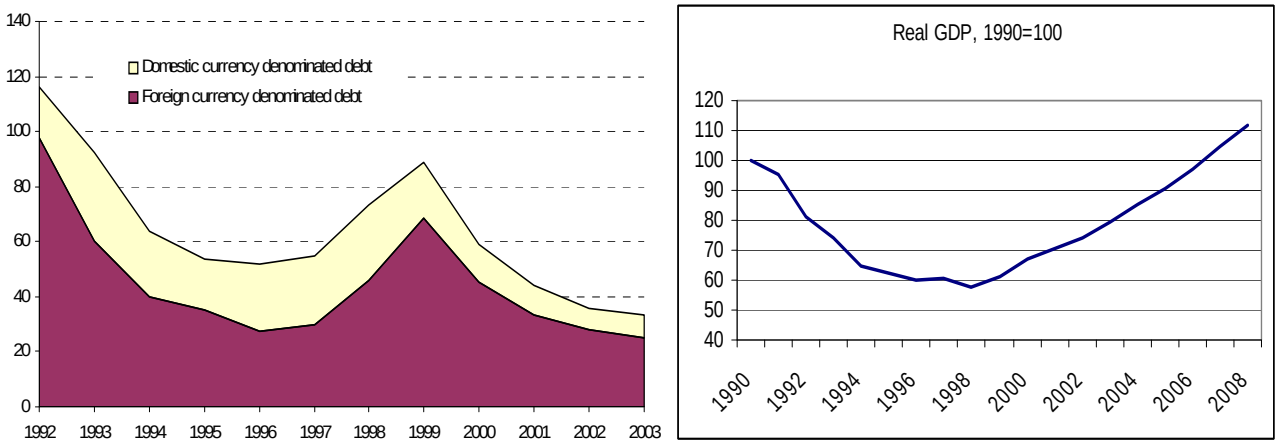
In the remainder of this paper we first sketch the background of the analysis, a bird's eye view of recent macroeconomics in Russia, focusing on oil, growth, and the real exchange rate (Section IV). We then introduce the permanent income (PI) concept, show the outcome in terms of sustainable spending levels, and explore the interaction between the PI spending rule, various complementary rules on non-oil deficits and the sustainability of the fiscal program that results (V). In section VI, we offer concluding remarks and some policy implications.

IV. Russia's economic and fiscal developments, 1995-2008

A. Fiscal laxity and financial indiscipline led to the currency crash 1998

The break-up of the Soviet Union and Russia's transition to a market economy in the early 1990s was marked by tumultuous economic and fiscal crises: a sharp drop in output, large fiscal deficits, hyperinflation, massive exchange rate depreciation and public debt levels well above 100 percent (Figure 1). In 1995, Russia embarked on a macroeconomic stabilization program, supported by the International Monetary Fund (IMF). This program was an exchange rate-based stabilization, to be supported by fiscal adjustment, and microeconomic structural reforms designed to stimulate growth. This program initially succeeded in bringing down inflation drastically.

Figure 1: Russia: Evolution of Public Debt and Real GDP

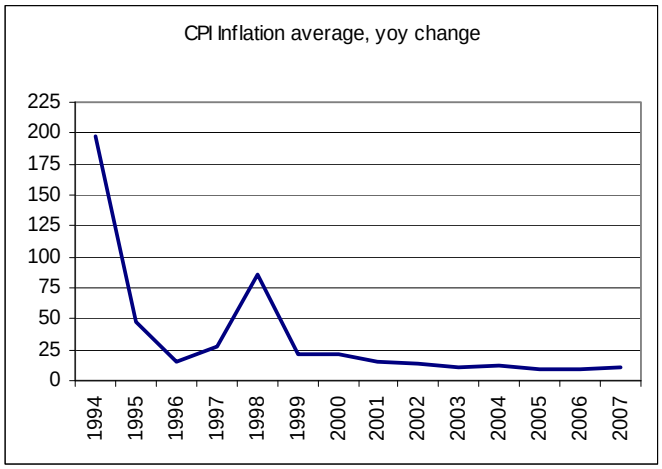


Source: World Bank.

But, as with most unsuccessful exchange-rate based stabilization programs, Russia's program's ultimate failure was traced to the lack of supporting fiscal adjustment and structural reforms. The pervasive non-cash settlements and barter nonpayment system resulted in de facto "soft budget constraints" on firms and led to a complete breakdown of financial discipline, delaying the fiscal adjustment process. The financial indiscipline with massive implicit subsidies amounting to about 10 percent of GDP resulted in declining tax collections, rising government debt, higher interest rates, and poor growth performance (Pinto, Drebentsov, Morozov 2000). These factors reinforced each other, contributing to the general financial and currency crisis in 1998. The lack of fiscal adjustment resulted in a renewal of inflationary pressures and real appreciation right at the time when external variables, in particular the price of oil, moved against Russia.

The consequent real appreciation presaged the ultimate currency crash. The real appreciation that resulted from an attempt to maintain an overvalued nominal exchange rate in the face of high and rising domestic inflation masked underlying negative debt dynamics but was clearly unsustainable. As so many exchange rate based stabilization programs that were not backed up by credible fiscal adjustment, this program, too, ended in a crash, a crash that was probably brought forward by the contagion effects from the Asian crisis (Figure 2).

Figure 2: Russia: Inflation and Nominal Depreciation



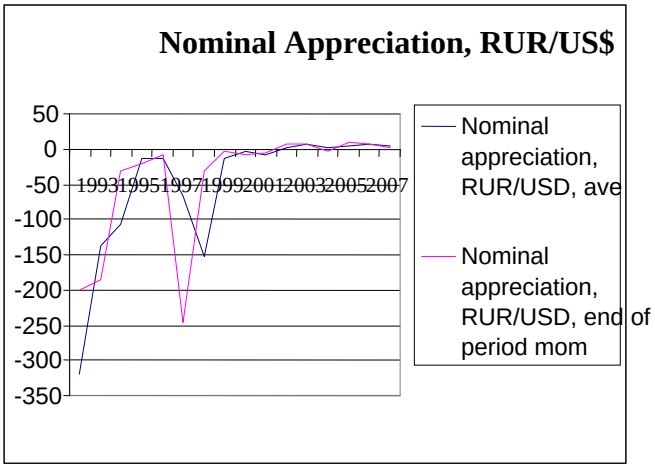
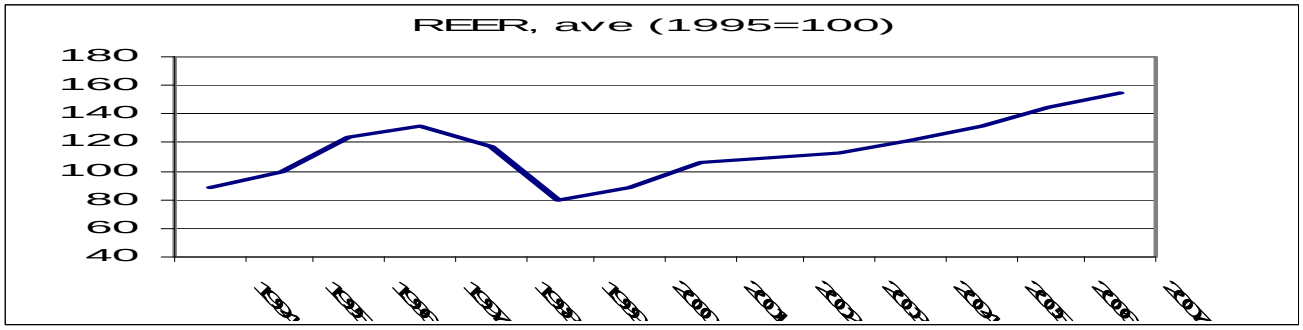


Figure 3: Russia: Real Effective Exchange Rate (REER), 1995=100



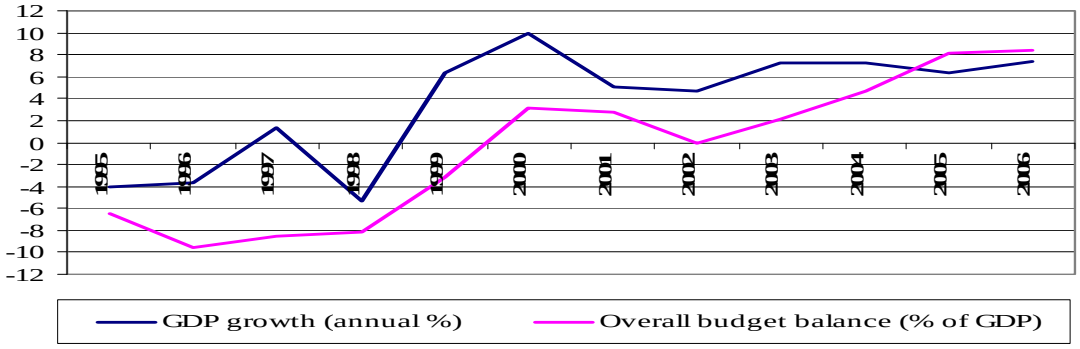
Eventually, a major devaluation (Figure 2, 3) coupled with debt restructuring and, finally, substantial fiscal adjustment brought the overvaluation to an end and set the Russian economy on a path towards sustainable growth.

B. But since 1999, Russia was set on a path of rapid recovery and growth

After the 1998 crisis, Russia experienced remarkable economic recovery and rapid growth that continued until the arrival of the global crisis in mid-2008. High oil prices provided strong winds in the sails of the Russian economy. But prudent fiscal policy with continuous fiscal surpluses, declining public debt and rising reserves accumulated in the Stabilization Fund have helped strengthen policy fundamentals and improved underlying policy environment for growth (Figure 4). Indeed, the Russian economy expanded by an annual average growth rate of almost 7 percent during 1999-2007 (Table 1). In 2007, real output grew at 8.1 percent with signs of the economy "overheating." Russia's nominal dollar GDP went from $300 billion in 2001 to about $1.3 trillion in 2007, making it one of the dozen largest economies in the world. Initially, output growth was driven by strong export growth and import compression; but from 2000 onwards, domestic demand was the driver of Russian growth, in particular buoyant household consumption and business investment (Figure 5). Comparing the 1998-09 and 2008-09 crises, it is clear that external

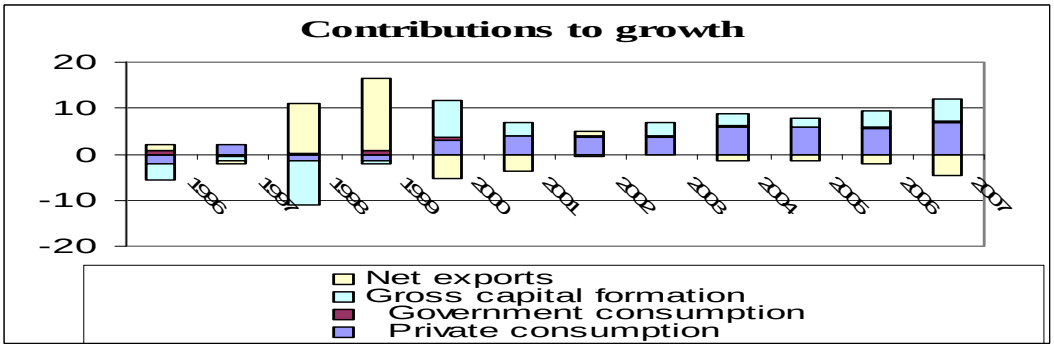
shocks were stronger and recovery likely to be longer during the current, global crisis (Figures 6a-6b).

Figure 4: Russia: Fiscal Surpluses Accompanied with Accelerating Growth



Source: Ministry of Finance data.

Figure 5: Russia: Contributions to growth, in percent, 1996-2007



Source: World Bank.

Figure 6: Oil and Capital Outflow Shocks Were Stronger in 2008--09 than in 1998-99

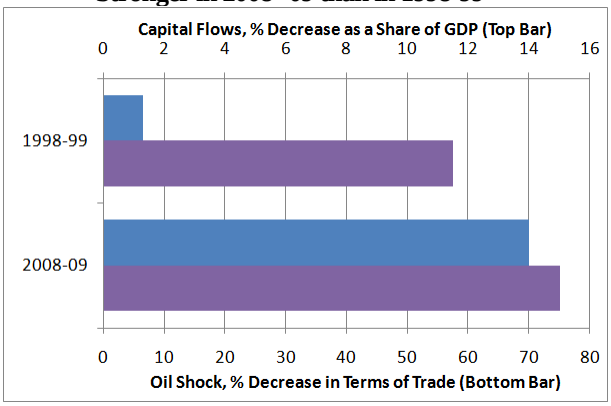
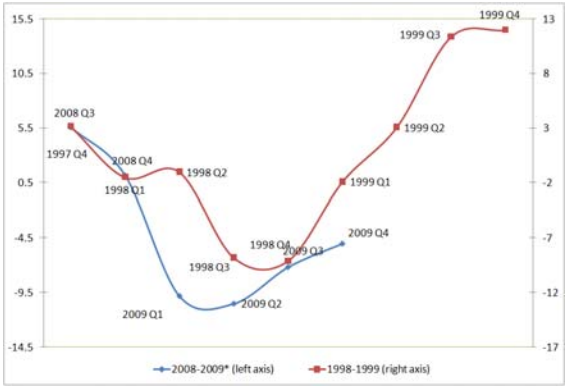


Figure 7. Recovery is slower in 2008-09 than in 1998-09



1/ Oil prices: Change between Oct '97-Dec '98 versus Jul '08-Jan '09
2/ Capital flows: For 1998-99, e-o-p change from 1997 (USD -18.2 billion) to 1998 (USD -21.7 billion); for 2008-09, e-o-p change from 2007 (USD 81.2 billion) to 2008 (USD -130 billion)
Sources: Rosstat, Thomson Datastream, World Bank staff calculations.

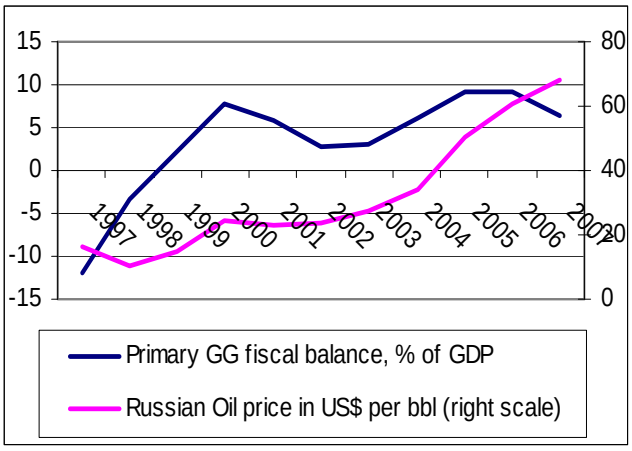
Table 1.1. Main macroeconomic indicators, 2006-09

	2006	2007	2008	2009
GDP growth, %	7.7	8.1	5.6	-7.9
Industrial production growth, y-o-y, %	6.3	6.3	2.1	-10.8
Fixed capital investment growth, %, y-o-y	16.7	21.1	9.8	-17.0
Federal government balance, % GDP	7.4	5.5	4.0	-6.4
Inflation (CPI), % change , e-o-p	9.0	11.9	13.3	8.8
Current account, billion USD	95.6	76.6	98.9	46.0
Unemployment, % (ILO definition) (period average)	7.2	6.1	6.3	8.4
Memo: Oil prices, Urals (USD a barrel)	61.2	69.5	95.1	61.4
Reserves (including gold) billion USD, e-o-p	303.7	478.8	427.1	425.0

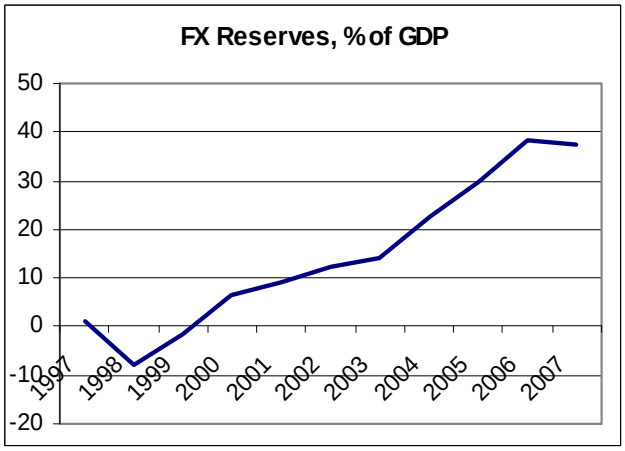
Source: Rosstat, CBR, Ministry of Finance, Bloomberg.
* Preliminary estimate by Ministry of Economic Development.
** Preliminary World Bank staff estimate.

Robust growth, higher oil prices and structural fiscal reforms that eliminated non-payments and arrears, transformed the (primary) fiscal deficit into a primary fiscal surplus (See Fig. 8a). As a consequence, the public debt-to-GDP ratio declined rapidly and foreign exchange reserves reached nearly 40 percent of GDP in 2007 (See fig. 8b).

Figure 8a. Primary Fiscal Balance



8b. Foreign Exchange Reserves



Source: World Bank.

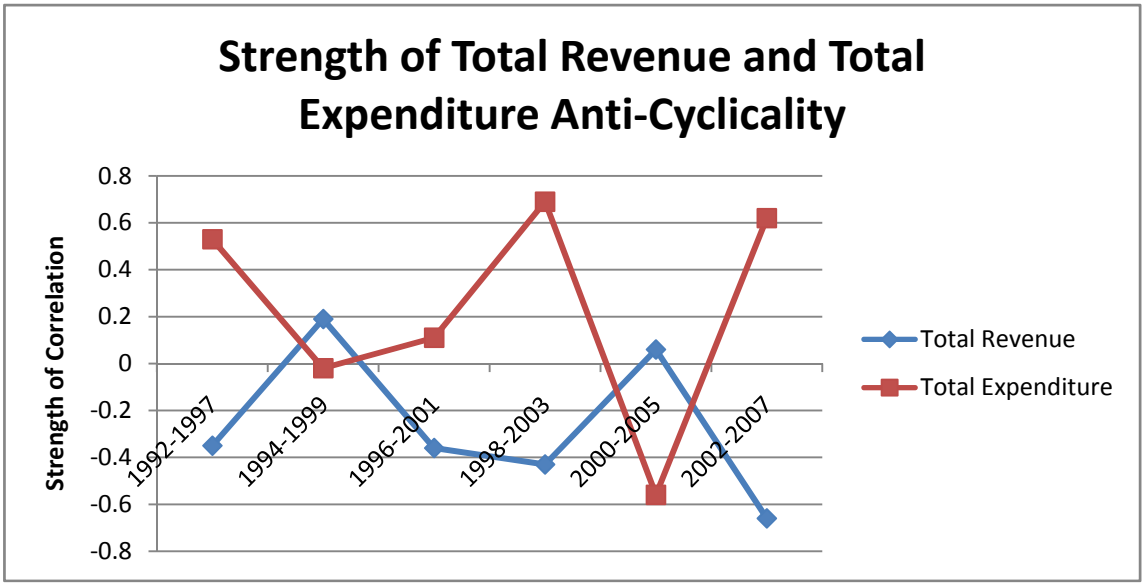
C. High oil prices boosted recovery, but prudent fiscal policy and fiscal reforms were key to strong economic and policy performance

Russia has certainly benefited from a favorable external environment as oil and metals prices recovered and capital inflows resumed. Russia's oil price increased by more than four-fold since 2000 until 2007 (see Fig. 6a). Nevertheless, Russia maintained a very conservative fiscal stance: although the non-oil primary fiscal balance (*nopd*)[2] turned into a deficit again in 2000, but this deficit stayed at modest levels of 2 to 4 percent of GDP—until 2007. By comparison, oil fiscal revenues were above 10 percent of GDP from 2005 onwards (fig. 8a), indicating substantial net savings out of oil revenues. In 2007, the *nopd* is estimated to have expanded further to slightly below 5 percent of GDP, although this is still less than a half of total fiscal oil revenues for the same year.

[2] Non-oil primary fiscal balance is defined as non-oil fiscal revenues minus non-interest expenditures.

In general, Russia has, until late 2007, wisely chosen to reduce spending volatility below the levels of oil revenue volatility. This was achieved by diverting a stable flow of resources from oil revenues to the budget, and allocating the remainder to a stabilization fund. In fact, there is some evidence that Russia's fiscal policy has in recent years been suitably counter-cyclical, despite the natural pro-cyclicality of its oil-dependent fiscal revenues; most recently, however, with fiscal relaxation in 2007, it appears that counter-cyclicality was reversed (see, for example, Spilimbergo 2005, and Bogetic and Fedderke 2008, Figure 9).

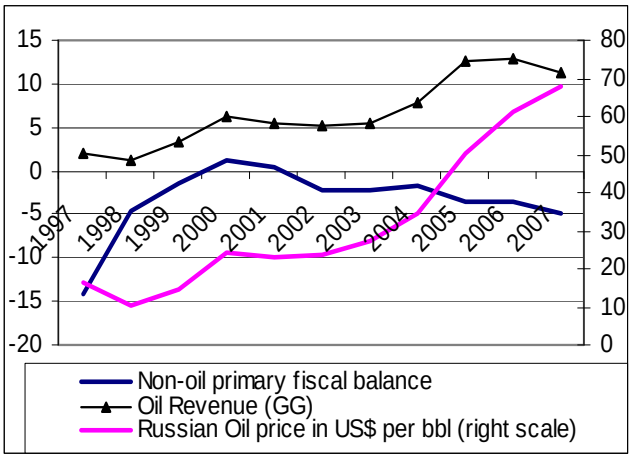
Figure 9: Russia: Strength of Anti-Cyclicality of Fiscal Revenues and Expenditures
(correlations with the real output trend; values above zero indicate degree of *anti*-cyclicality)

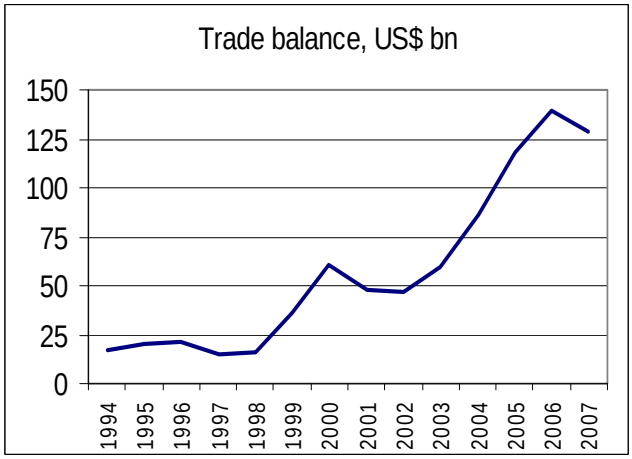


Source: Bogetic and Fedderke (2008).

The prudent fiscal policy stance was also supported by important fiscal reforms. Russia introduced many fiscal management innovations in recent years, including: treasury management of the budget, a medium-term fiscal framework (a 3-year budget), explicit long-term budget planning modeled after best practice in New Zealand and Australia, and the introduction of oil revenue management funds modeled after good international practice. Since January 1, 2008, the Oil Stabilization Fund was split into the Reserve Fund and a National Welfare Fund, which will accumulate oil revenues beyond the Reserve Fund maximum of 10 percent of GDP. Simultaneously, the external position improved markedly, with a five-fold increase in the trade balance as compared to its crisis level (fig. 10b).

Figure 10a. Non-oil Primary Fiscal Balance (% of GDP) 10b. Trade Balance, US$ bn



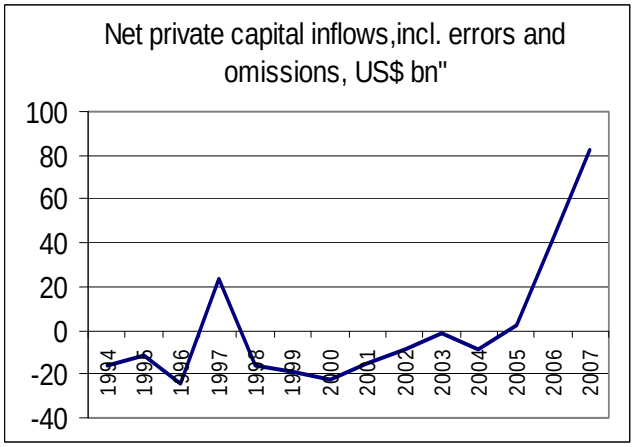


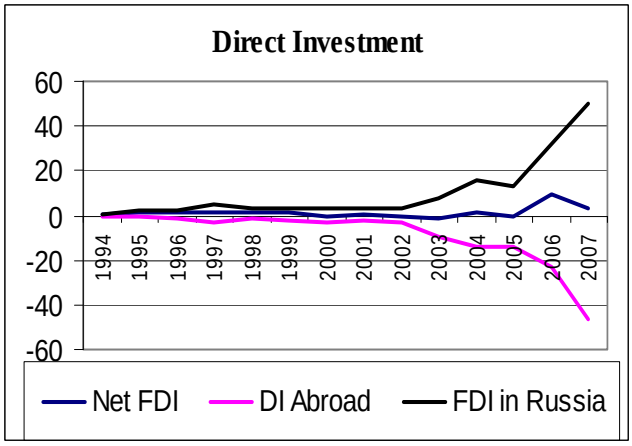
The conservative fiscal stance and strong external position, aided by high oil prices, helped restore confidence and resulted in private capital inflows. In fact, the strong fiscal fundamentals, large foreign exchange reserves, and stronger capital account have helped Russia weather the short, liquidity crunch in August 2007 and also the ongoing global financial crisis. Compared with other Eastern European and CIS countries, Russia's emerging market bond spreads have remained fairly low, in the 200 basis point range, similar to those of Poland and Hungary, and have so far moved up marginally; they also remain below the average Global Europe EMBI spread. By contrast, more vulnerable economies such as Kazakhstan, experienced significant rise in the spreads.

Importantly, Net Foreign Direct Investment (FDI) position turned positive since 2000 onwards, while net private capital inflows soared from almost zero in 2000 back to over $80 billion in 2007 (Fig. 11a, b). The rise of FDIs is an important structural development in the Russian capital account that is likely to reduce its vulnerability to "sudden stops" compared with the previous period. International experience and recent research shows that countries with higher share of FDI and equity-like investments (compared with bond, bank loans, and trade credits) in total capital flows typically experience lower volatility and risk of "sudden stops", i.e., massive capital outflows (see, for example, Levchenko and Mauro 2006).[3] Nevertheless, the level of FDIs to Russia remains comparatively lower than in China, India, and Brazil, for example.

[3] "Sudden stop" is defined here as a drop in net financial flows of 5 percent of GDP or more compared with the previous years. In the case of Russia, using 2007 dollar GDP, this indicator would be equivalent to about $64 billion. In the event, the "sudden stop" Russia experienced in the last quarter of 2008 was much larger, from the large surplus in the first nine months of that year to an outflow of almost $130 billion in the last quarter.

Figure 11a.Private Capital Flows, US$ billion **11b. Net FDI, US$ billion**





Source: World Bank.

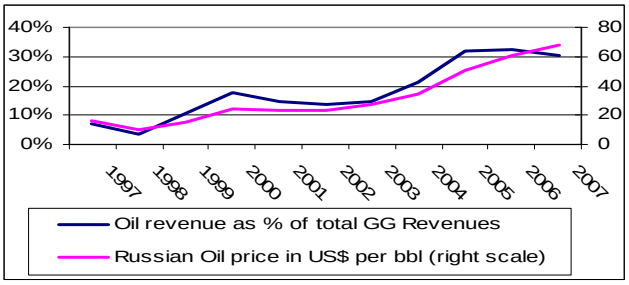
D. But with rising dependence on oil, macro tensions reemerged in 2008

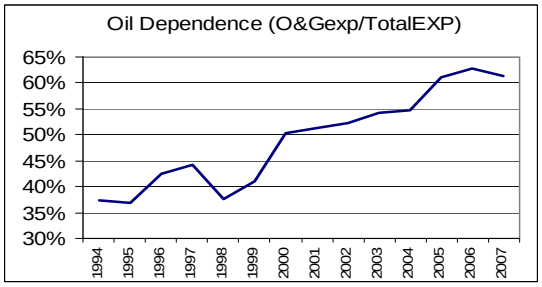
The strong recovery of oil prices since about 2000 has increased Russia's dependence on oil and gas revenue (See Fig. 10a and b). The share of oil revenues in total fiscal revenue increased substantially--from about 10 to 30 percent of GDP. Instead of declared policy of diversification, Russia has, de facto, been *specializing* in oil exports and oil fiscal revenues. While this has seemingly not been a problem during the period of high oil prices, it remains a major source of major vulnerability and shocks when oil prices begin a rapid descent from the recent levels (as was the case since mid-2008). In 2007, oil accounted for about 60 percent of total exports. In a word, higher oil revenues allow for additional spending room, but they also complicate macroeconomic management and lead to an increased dependence on a highly volatile source of income.

There are two problems with respect to high dependence on oil revenues: volatility of oil prices and the exchange rate consequences of spending oil revenues. Oil revenues are highly volatile, even when quantities are relatively easy to predict: price volatility is high, making oil revenue a highly *uncertain* source of income even when production levels are relatively stable.

Uncertainty of a major revenue source calls for conservatism in deciding what level of expenditure out of oil revenues is sustainable. For example, basing fiscal, especially expenditure policy on a prediction of high oil prices while prices turn out low will cause major macroeconomic problems of adjustment because expenditure commitments are difficult to scale down in mid course and investment projects are lumpy and costly to delay or stop. By contrast, basing policy conservatively on relatively low oil prices while they turn out higher results in a much more pleasant dilemma: what to do with windfall, excess revenues; in practice, it means that expenditure benefits of such windfalls are somewhat delayed—and this may be a small price to pay for maintaining fiscal prudence and avoiding painful adjustments compared with the case when oil prices turn out much lower than planned.

Figure 12: Russia's Increased oil dependence budget (left) and export revenues (right).





In Russia, since 2007, the fiscal stance was becoming more relaxed compared with previous years, contributing to the overheating of the economy. The projected federal government budgetary surplus for 2007 went down from 4.8 to 2.8 percent, because of expenditure increases authorized under the 2007 Budget Law amendment. Total non-interest expenditure increased from 17 to 20 percent of GDP (compare column 1 and 2, Table 2). The approved medium-term fiscal framework entailed a fiscal relaxation that under the then prevailing oil price outlook envisaged a small primary surplus (0.3% of GDP) in 2008 and essentially balanced budget in 2009-2010 (Table 2). The bulk of the planned increase in public expenditures was for infrastructure development and social spending to be implemented largely through large state corporations.

Table 2. Consolidated budget: revenues, expenditures, and the fiscal surplus, 2007-09

	2007 (actual)	2008 (actual)	Federal Budget Law (Nov 2009)	Federal Budget Law Revised (Apr 2009)	2009 (actual)
Consolidated budget					
Revenues, % GDP	40.2	38.5	n/a	n/a	33.1
Expenditure, % GDP	34.1	33.7	n/a	n/a	41.3
Surplus, % GDP	6.1	4.8	n/a	n/a	-8.2
Non-oil balance, % GDP	-2.9	-5.8	n/a	n/a	
Federal budget					
Revenues, % GDP	23.6	22.3	21.2	16.6	18.6
Expenditure, % GDP	18.1	18.2	17.5	24.0	25.2
Surplus, % GDP*	5.4	4.1	3.7	-7.4	-6.4
Non-oil balance, % GDP	0.6	-6.4	-5.4	-12.5	-14.3

Source: Ministry of Finance, Economic Expert Group (EEG).* including quasi-fiscal support to banks.

The other macro issue, exchange rate management in oil-rich countries, has attracted a huge amount of attention. The macroeconomic issue here is that high public spending inevitably targets goods and services where international trade offers only an imperfect substitute or none at all, such as construction and other "non-traded" goods and services. This, in turn, implies that high spending unavoidably puts upward pressure on the prices of those goods and services, with a real appreciation of the currency as an unavoidable result. Once expenditure levels are set, the authorities have no choice on the real exchange rate consequences, only on *how* they come about. One option through which appreciation takes place is a gradual appreciation/revaluation of the nominal exchange rate, so as to effect whatever real appreciation is necessary. If that option is not chosen, domestic goods end up underpriced given the state of demand for them. The other way of effecting a real appreciation is via inflation. But it is important to realize that such

inflationary pressures triggered by excessive expenditures are essentially fiscal in nature, related as they are to expansionary fiscal policy; monetary tightening alone will not be sufficient to effect desirable degree of disinflation.

Since 2007, the Russian authorities seemed to have pursued a policy that resisted nominal appreciation and attempting to fight inflation while embarking on increasing fiscal expenditure. This, in the context of considerable liquidity in the economy and negative real interest rates has been an increasingly inconsistent policy mix. In early 2008, however, the Central Bank of Russia has begun raising interest rates and signaled a more flexible exchange rate policy in the future. This has heralded a welcome rebalancing of monetary-exchange and fiscal policy towards more active interest rate and more flexible exchange rate policy, which was accelerated later during the global crisis. But the challenge remains to maintain public expenditure levels in the future consistent with the reduction of inflation while meeting legitimate social and infrastructure investment needs in the coming years.

Box1: Russia's anti-crisis policy response in late 2008 and 2009

The Government has implemented a set of fiscal measures to contain the impact of the crisis. The total fiscal cost of measures implemented in 2008 and 2009 amount to more than 2.9 trillion rubles or 6.7 percent of GDP (box table 1). These measures were effective in preventing a currency and banking crisis but less so in cushioning the impact on the real economy and the poorest households, although measures targeting the broader middle class (e.g., increases in public sector wages and pensions) that were planned before the crisis were implemented during the crisis, thereby cushioning the overall social impact (Bogetic and Smits 2010).

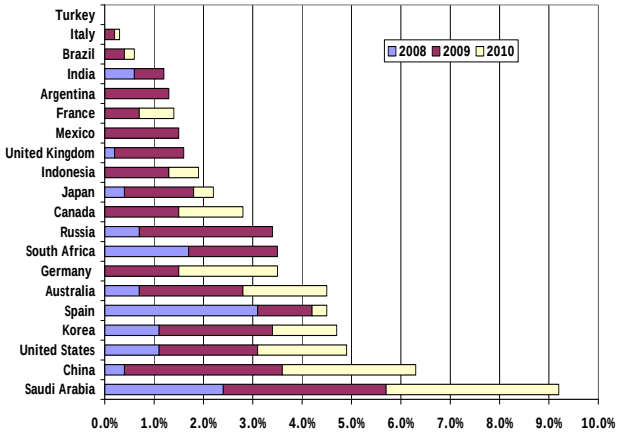
Box Table 1: Summary of anti-crisis fiscal measures in 2008 and 2009 (percent of GDP)

	2008	2009	Total
Strengthening the financial sector	**1.9**	**1.4**	**3.3**
Recapitalization and other direct support	0.8	0.2	1.0
Subordinated loans	1.1	1.2	2.3
Promoting economic growth	**0.7**	**1.8**	**2.5**
Public spending on goods and services	0.1	0.1	0.2
Fiscal stimulus aimed at firms	0.5	1.7	2.2
Fiscal stimulus aimed at households	0.1	..	0.1
Protecting socially vulnerable	**..**	**0.3**	**0.3**
Of which labor market policies (including unemployment)	**..**	0.3	0.3
Transfers to regions to support anti-crisis measures, introduced by sub-national governments (social programs, support to firms).	**..**	**0.7**	**0.7**
Total	**2.6**	**4.1**	**6.7**

Note: Excludes quasi-fiscal and monetary measures.
Source: World Bank estimates; Government of Russia.

Compared with other G-20 countries, Russia's "fiscal stimulus" has been large (more than the internationally recommended 2 percent of GDP) (box figure 1). This seems appropriate in view of (i) the much larger growth deceleration Russia has experienced than many other G-20 countries; (ii) weak macroeconomic stabilizers, and (iii) large fiscal reserves accumulated in the oil Reserve Fund (about 8 percent of GDP).

Box figure 1: Estimated size of fiscal stimulus measures in G-20 countries (percent of GDP).

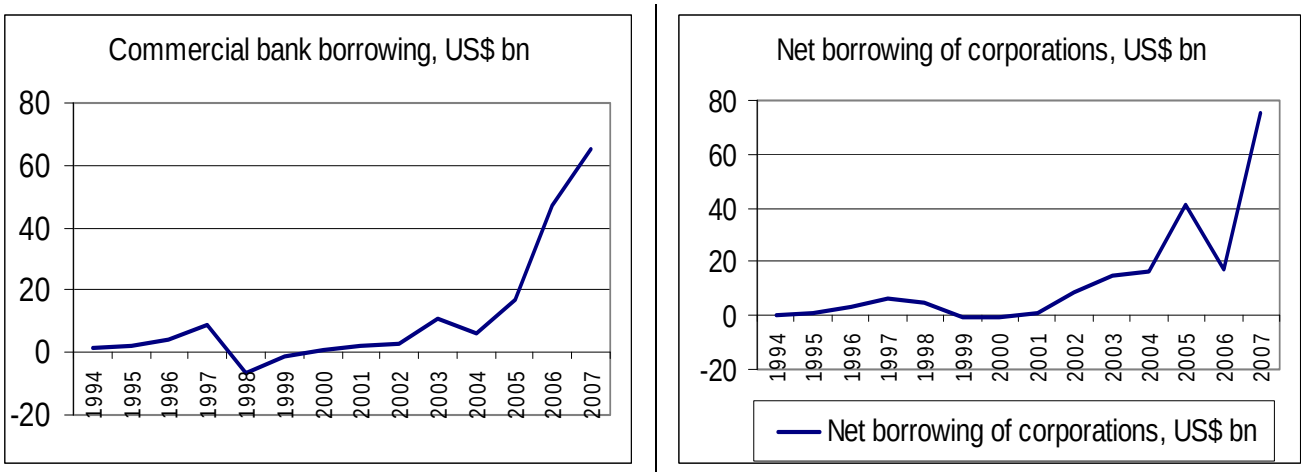


Source: Data for nonRussia G-20 countries, IMF (based on packages announced through late February). The figures do not include (i) below-the-line operations, (ii) measures that were already planned for, and (iii) banking-sector support measures.

E. And the banking system vulnerabilities are rising

In recent years before the global crisis, resistance to nominal appreciation in the face of upward pressure on the real exchange rate, with financial conditions, offered the banks a one-way bet. In this environment, attempts to sterilize capital inflows lead to high domestic interest rates while exchange rate pressure is up towards an appreciation. With ample global liquidity and low global interest rates, Russia's banks and corporations were able to borrow cheaply abroad, earn high interest rates by lending at home, and expected to make additional capital gain on their foreign exchange exposure (Figure 11).

Figure 13: Russia: Increased forex borrowing by banks (A) and corporations (B)



Source: Central Bank of Russia.

Time and again, as observed among other oil exporters that did not accept the real exchange rate consequences of their spending plans, this resulted in rising bank fragility. The high foreign exchange exposure that resulted threatened to wipe out large parts of bank equity and a substantial part of deposits if and when oil prices unexpectedly fall and the anticipated currency appreciation evaporates and rapidly turns into depreciation.

The banking sector entered the global financial crisis in a relatively strong position. At the end of 2008, Russia's banks enjoyed relatively sound financial indicators, with strong solvency (average capital adequacy ratio of 15.5%), high profitability (return on equity of 22.7%), low non-performing loans (2.5% of total loans)[4] and adequate liquidity (short term liquidity ratio of 72.9%).

However the financial sector indicators masked exposures to liquidity and credit risks. Many Russian banks relied, indeed, excessively on nontraditional (foreign) external sources of funding. The loan-deposit ratio of the Russian banking system increased from

[4] Non-performing loans in Russia are defined as debt-service charges overdue by more than 60 days, excluding refinanced and restructured loans.

around 126 percent in 2005 to 149 percent in the second half of 2008, reflecting the greater reliance of banks on external foreign borrowing. Further, some characteristics of loan portfolios exposed the banks to enhanced credit risk. Firstly, while most corporate loans are classified as having medium-term maturities, they are often in fact provided on a short-term basis with a rollover agreement and corporate borrowers usually repay these loans with their working capital. This arrangement subjects both companies and banks to significant liquidity and credit risk. Secondly, with 30 percent of loans denominated in foreign currency, Russian banks were exposed to a depreciation of the ruble. Thirdly, the concentration of bank lending in the real estate and construction sectors, coupled with a high reliance on real estate for collateral, exposed some banks to real estate prices. Finally, loans were often made based on stated income rather than documented income or audited financial statements, exposing banks to further credit risk. As a result, close monitoring financial sector risk and its fiscal implications will be important in the aftermath of the crisis, as will sustained supervisory and regulatory reforms required to strengthen the financial system in the medium term.

Against this background, Russia's government has handled the global crisis well but long-term fiscal risks are significant. It implemented a swift and massive set of fiscal measures to contain the impact of the crisis. The total fiscal cost of measures implemented in 2008 and 2009 amount to more than 2.9 trillion rubles or 6.7 percent of GDP (Box 1). The fiscal management and the economic and social impact during the crisis was analyzed at length elsewhere (Bogetic and Smits 2010; Bogetic, Smits, Sulla and Tesliuc 2010, and Bogetic, Smits and Sulla 2010). Suffice it to say that the crisis has dramatically altered the short term economic, fiscal and social outlook, bringing to the fore the issues of longer-term fiscal risks and fiscal sustainability analyzed in this paper.

V. Fiscal policy for the next 30 years:

Fiscal sustainability and managing oil price uncertainty[5]

A. A framework for fiscal sustainability and managing uncertainty in oil-rich countries

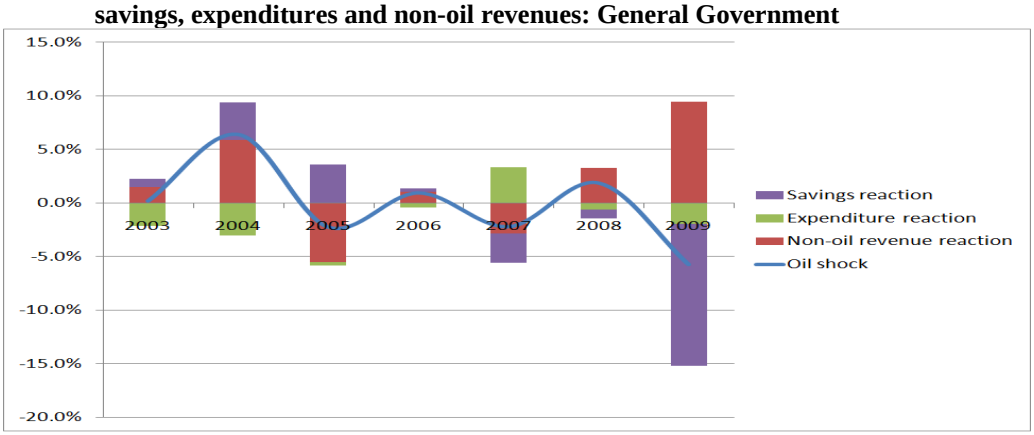
Russia has managed its public finances well. The government has wisely chosen to reduce spending volatility below the levels of oil revenue volatility by diverting a stable flow of resources from oil revenues to the budget, and allocating the remainder to a stabilization fund. In doing so, Russia has moved significantly from complete fiscal discretion and lack of expenditure control of the past to sound, rule-based management of fiscal policy. Indeed, it could be argued that this was partly key to its economic success since 1999. Nevertheless, new expenditure pressures in late 2007 and 2008 could potentially result in a return to unsustainable fiscal spending under not unreasonable scenarios of lower oil prices and large spending pressures. How could such a scenario be avoided?

In the years leading up to the 2008-09 crisis, expenditures and non-oil revenues remained volatile. Figure 13 shows an annual change, measured as a percentage of GDP in expenditure, in savings and non-oil revenue as a result of an increase or decrease in

[5] This simulations of the fiscal sustainability here are based on Van Wijnbergen and Budina (2008).

fiscal oil revenues. An increase in oil revenues can be used to (i) increase expenditures, (ii) reduce non-oil revenue base or (iii) increase savings. There has been a considerable variation in each of these variables, with significant fluctuation in expenditures. The economic crisis and subsequent sharp downward adjustment in oil prices in the second half of 2008 has resulted in a (i) large drawdown of fiscal savings, (ii) a decrease in non-oil revenues.

Figure 13: Changes in fiscal oil and gas revenues (oil shock) and fiscal policy reaction – changes in savings, expenditures and non-oil revenues: General Government



Source: World Bank estimates.

We argue that for Russia's existing allocation rule to be effective in the long run, it could usefully be complemented by a rule on the non-oil primary fiscal deficit. Intuitively, the rationale for such a rule can be summarized in that there is no obvious point to adding money to one fund with the one hand, and borrowing against future oil revenues from another. It is better, in our view, to design and implement a fiscal rule that would only spend, in the long run, as much as it is earned, i.e., as much as the "permanent income" from oil assets would allow, leaving the stock of assets intact for future generations. Such a rule—if pursued consistently--would *automatically* ensure fiscal sustainability, stabilize the level of public expenditures, and establish greater fairness between current and future generations, the latter of which would come to enjoy the benefits of long-term strong economic performance and oil assets that would remain undiminished. The Fiscal Sustainability Analysis tool (FSA) developed at the World Bank and presented in the annex is designed to analyze the interaction between these two rules (oil fund allocation rule and non-oil primary deficit rule).

B. Developing scenarios for Russia: Deficit rules, oil income and sustainability

Assumptions: the value of Russia's oil wealth, and sustainable spending, and the derivation of the permanent income fiscal rule for Russia

Three strategic questions frame the challenge that Russia faces in managing its oil windfall:

(1) ***How much oil revenue should be saved and spent every year*** or how to set meaningful oil fund/non-oil deficit rules? What is the link between Oil fund rule and non-oil deficits and what are their implications for fiscal sustainability?

(2) ***How to deal with uncertainty and manage oil revenue volatility?*** and

(3) What other key (macro or capacity-related) factors constrain the overall level of fiscal spending?

Simulations presented are based on the current World Bank's average oil price projection for 2009-2012 and real price of USD60 per barrel in years *after 2013* (Figures 14-15). This oil price assumption is based conservatively on expert oil view of long term oil prices (World Bank's Prospects Group 2010). But it is relatively more optimistic that the short term oil price assumption used by Russian government (USD 41 per barrel Urals in 2009 and USD 50 per barrel Urals in 2010). Price of gas is assumed to be correlated to price movements of oil. The baseline scenario for oil and gas extraction profile is based on the relatively conservative scenario presented in the Government of Russia 2020 strategy document.

Figure 14: Russia's oil and gas production volume: government strategy 2020

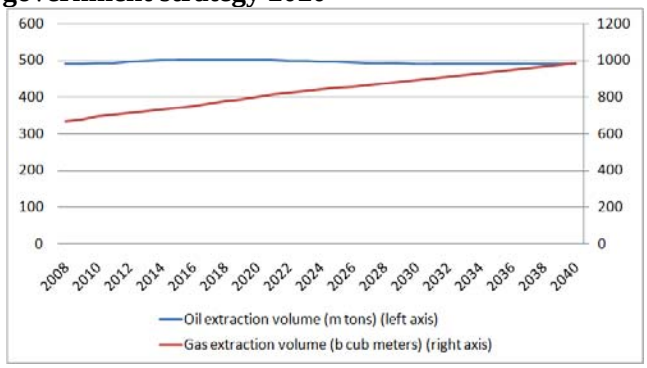
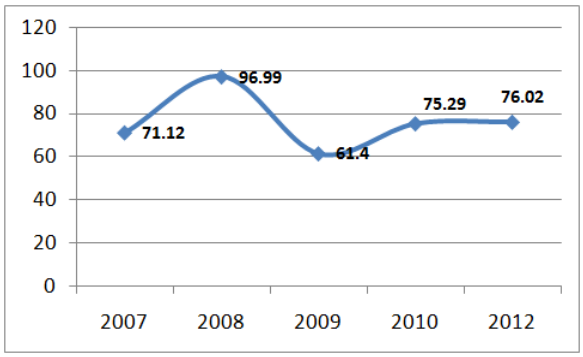
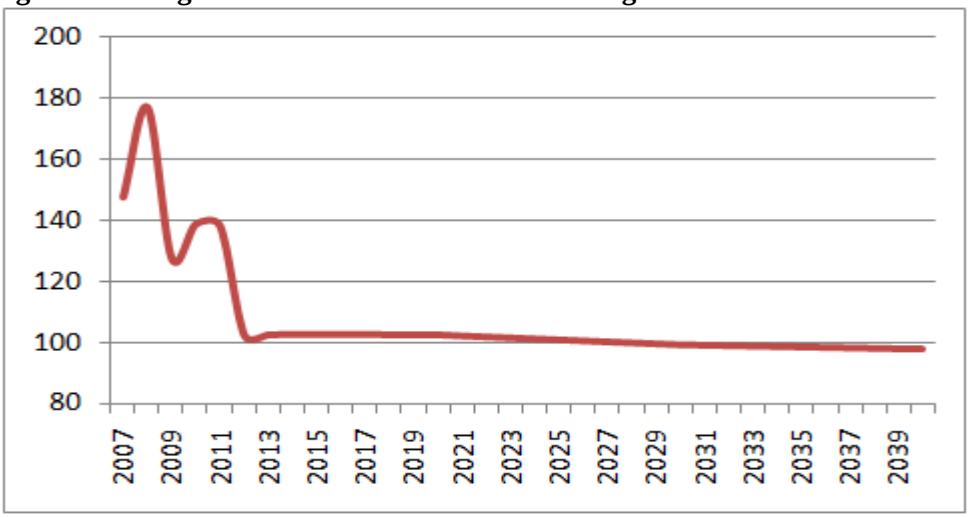


Figure. 15. Oil price assumption for projections



Source: World Bank staff estimates, oil and gas extraction profile based on the Government of Russia, economic development strategy 2020.

Figure 16: Long-term fiscal revenues from oil and gas in billions of USD 2008.



Source: World Bank staff estimates

The following are some key assumptions. We discount the two streams of future income back to 2009 in a Net Present Value calculation. We assume a safe real rate of interest of

about 3 percent (equal to the US long-term real rate plus a hundred basis points for Russia-specific country risk under "normal" conditions). This is added to a long-term US inflation projection of 2.4 percent to arrive at a safe nominal rate of 5.5 percent. But the income stream being discounted is not a safe stream, as the two alternative sets of assumptions already indicate; they are shrouded in substantial uncertainty[6]. To account for their riskiness, we add a 3 percent risk premium to the basic safe real rate. Obviously, this puts a limit on the "measured uncertainty" called risk but it appears a reasonable assumption that would cover the possible level of risk under most conditions in Russia based on past experience.

Under our oil price assumptions, this calculation shows ***Russia's oil and gas wealth at a total of about US$3 trillion (2009), or 215 percent of projected 2009 GDP.*** The permanent income equivalent of this amount is the constant real annual amount that has the same discounted value, this time using the safe real rate for discounting as it is by assumption a safe stream.

This sustainable ***permanent income equivalent comes out at 79.3 billion in constant 2009 US dollars, or 4.3 percent of GDP in 2009*** (See table 3). Given the stocks, extraction rates and other main assumptions, this is the amount that can be safely consumed each year out of Russia's oil revenues without running into sustainability problems while sharing out the oil wealth fairly over all current and future generations.

Table 3. Permanent Income Approach to Oil wealth

Net wealth US$ 2009 trillion	Net oil wealth to 2009 GDP (%)	Annuity 1/ US$ 2009 billion
3	215	60.1

Source: World Bank staff estimates
Assumption: Real Safe rate of interest =3%, Risk premium=3%, Foreign inflation=2.4%
Note: All simulations are illustrative at this point. In addition to the assumptions on oil prices and exploitable oil reserves, the results depend on the profile of the extraction, the pace of investments, and financial and operational decisions of the operators that may change the path of revenue that the government receipts from oil operations.
[1] This annuity can be interpreted as the sustainable level of annual spending.

The Permanent Income (PI) amount is what can be safely spent on an annual basis indefinitively, thus allowing future generations to share in equal absolute annual amounts (not per capita or as share of their income). The measures of permanent income (PI) should be compared to the actual non-oil primary fiscal deficit (*nopd*), as the nopd represents the net claim on non-oil resources, to be covered by the PI amount transferred from the Oil Fund.

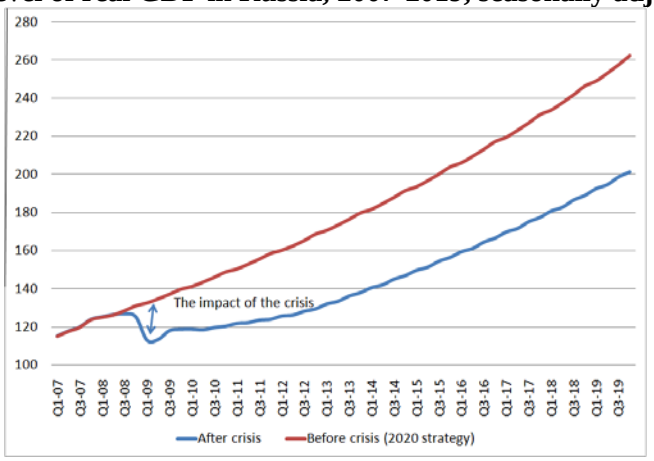
C. A look to Russia's fiscal future: From the short- to medium- to long-term

A comparison between PI and actual non-oil fiscal balance shows that Russia has remained below its sustainable, permanent income (PI) spending limits in all recent years except in 2008 and 2009, largely as a result of global economic slowdown. The global crisis has resulted in a massive change in medium term growth trajectory of Russia's economy that was anticipated before the crisis (Figure 16). Just before the global

[6] See S. van Wijnbergen (2008), "The Permanent Income Approach in Practice: A Policy guide to Fiscal Sustainability for oil rich countries" for a detailed discussion of these issues.

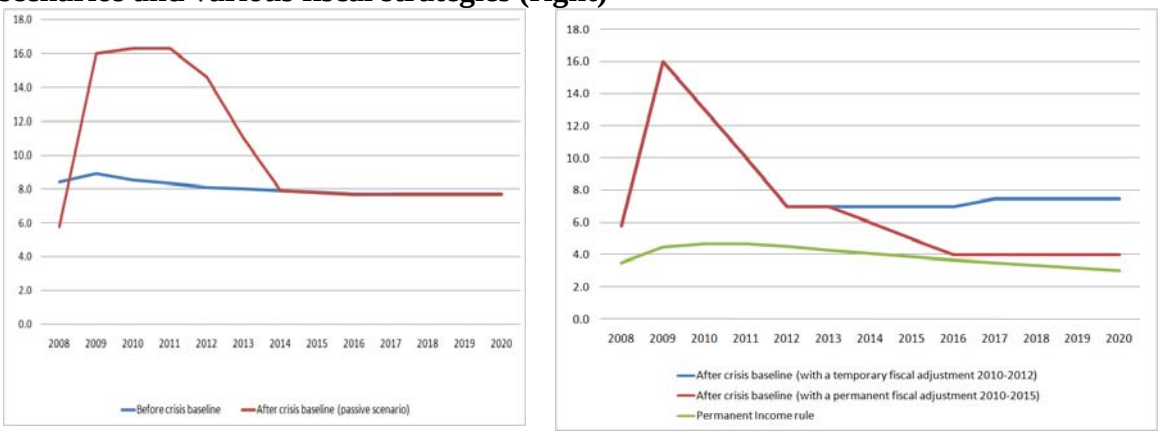
crisis, the long-term expenditure pattern was becoming unsustainable due to increases in social expenditures. But now, as a result of the crisis, absent fiscal adjustment, the non-oil primary deficit will increase sharply well above Permanent Income (PI) spending limits (Figure 17).

Figure 17. The level of real GDP in Russia, 2007-2019, seasonally adjusted



Source: After crisis scenario is based on World staff estimates, before crisis scenario is based on assumption of Russia's long-term development strategy 2020.

Figure 18. Non-oil primary deficit as a share of GDP before and after crisis scenarios and various fiscal strategies (right)



Source: World Bank staff estimate

Given the impact of the global crisis,[7] we present various *illustrative* fiscal strategies for the non-oil deficit to GDP ratio *nopd:*

1. ***A base case "before crisis" scenario, which is guided by the medium term fiscal framework broadly outlined in the Russian economic strategy 2020 and three-year budget adopted before the crisis***, envisaging non-oil primary deficits in excess of its "permanent income" equivalent in order to accommodate high social

[7] For a comprehensive discussion, see *World Bank's Russian Economic Reports* 17, 18 and 19 (2008-9). www.worldbank.org/ru.

expenditure and infrastructure requirements. Thereafter, we assume that spending levels for consolidated government will decline to about 35 percent of GDP, while non-oil revenues to GDP ratio, after some improvement, remain at around 27.5 percent of GDP. The resulting non-oil primary deficit increases initially, reaching nearly 6 percent of GDP, but then declines and remains at 3.7 percent till the end of the projection period (2040). This scenario is now only an ***illustrative benchmark*** to show how much the medium to longer term real GDP and fiscal outlook has changed after the crisis. This illustrative scenario has been taken over by tumultuous events of the global crisis and its impact on Russia. But it does serve as comparative, departure point for the more realistic, "after crisis" scenarios discussed below.

2. ***"After crisis", passive, base case scenario, which assumes the impact of the global growth recession and the oil price shock of 2008-2009***. This scenario includes projected decline in Russia's real GDP in 2009 of 7.9 percent, followed by a modest, 3.2 percent recovery in 2010 but, as shown in Figure 17, it assumes that Russia will reach its pre-crisis real GDP only in late 2012. This means that the global crisis has taken away at least half a decade of prosperity that was assumed to be ahead, before the crisis. Assuming that spending plans are the same as in the base case scenario, reflecting significant expenditure rigidities, this scenario implies that the projected non-oil primary deficit will be much larger (exceeding 16 percent of GDP in 2010-11) than the non oil primary deficit under the "before crisis" base case. This scenario illustrates the magnitude of fiscal dislocation brought about by the crisis if no action is taken and no fiscal adjustment effected in the short to medium term.

3. ***A Permanent Income (PI) strategy scenario,*** which assumes that the non-oil deficits in the next five years and beyond are bounded by the government's adoption and implementation of the "permanent income" rule and the associated flow of oil revenue to the budget. One implication of this rule is that because the economy will be growing, non-oil deficit to GDP ratios will decline in the future. This scenario illustrates the "ideal" policy stance for the long term and a long term aim towards which fiscal policy should return following the period of sustained fiscal adjustment required by the crisis.

4. Finally, we also specify ***two cases of fiscal policy adjustment that spell out ways in which fiscal policy could return to a long-term sustainable path: temporary and sustained fiscal adjustment scenarios.*** In both scenarios, the size of fiscal adjustment in the period 2010-2012 is equivalent to about 2-3 percent of GDP per year, however, in *sustained* adjustment scenario that extends in medium term, fiscal expenditures remain at 31.5 percent of GDP, while under *temporary* fiscal adjustment, expenditure adjustment is not sustained, so that expenditures gradually increase towards 35 percent of GDP. Fiscal adjustment in 2010-2012 is based on a combination of expenditure (a decrease in expenditures by 1 percentage points of GDP) and revenue (an increase in non-oil tax base by 1-2 percentage points of GDP) measures. These scenarios illustrate the need for longer term expenditure restraint for fiscal sustainability and lower volatility of public finances.

5. ***We argue that medium term fiscal policy should usefully be guided by an approach similar to "permanent" or sustained fiscal adjustment scenario outlined here.*** This approach results in a feasible, sustained fiscal adjustment, returning fiscal policy on a long-term sustainable path within a reasonable amount of time. But the transition to that scenario will require coordinated and *sustained* revenue, expenditure, and financing measures. The size of adjustment in each year will also have to be realistic in order to avoid backsliding.

Table 4: Assumptions for fiscal adjustment scenarios

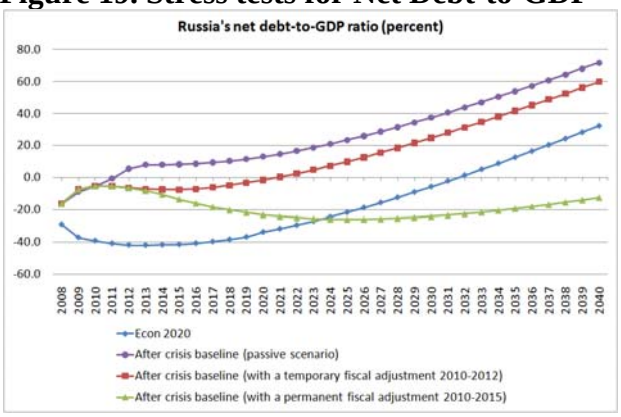
AFTER CRISIS with Fiscal adjustment 2010-2012 (temporary)										
Fiscal data (% of GDP)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Non-oil total revenue and grants	27.90	17.50	19.50	21.50	23.50	24.50	25.50	26.50	27.50	27.50
Non-oil primary expenditure and net lending	33.70	33.50	32.50	31.50	30.50	31.50	32.50	33.50	34.50	35.00
Size of fiscal adjustment(% of GDP)		(10.20)	3.00	3.00	3.00	-	-	-	-	(0.50)
..o/w revenue side measures	-	(10.40)	2.00	2.00	2.00	1.00	1.00	1.00	1.00	-
..o/w expenditure side measures		(0.20)	(1.00)	(1.00)	(1.00)	1.00	1.00	1.00	1.00	0.50
AFTER CRISIS with Fiscal adjustment 2010-2015 (sustained)										
Fiscal data (% of GDP)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Non-oil total revenue and grants	27.90	17.50	19.50	21.50	23.50	24.50	25.50	26.50	27.50	27.50
Non-oil primary expenditure and net lending	33.70	33.50	32.50	31.50	30.50	31.50	31.50	31.50	31.50	31.50
Size of fiscal adjustment(% of GDP)		(10.20)	3.00	3.00	3.00	1.00	1.00	1.00	-	-
..o/w revenue side measures	-	(10.40)	2.00	2.00	2.00	2.00	1.00	1.00	-	-
..o/w expenditure side measures		(0.20)	(1.00)	(1.00)	(1.00)	1.00	-	-	-	-

Source: World Bank staff estimates. Data for 2008 is based on the data from the Ministry of Finance.

How Fast Does Russia Accumulate Net Debt Under Alternative Scenarios?

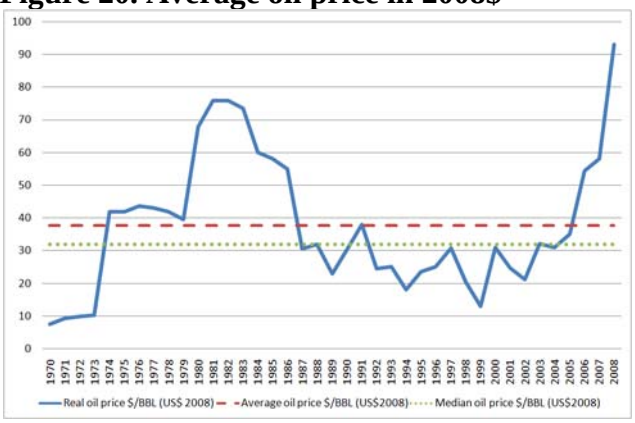
With different fiscal strategies specified, we run the fiscal sustainability model to derive illustrative baseline projections for net public debt throughout the projection period. Note that as explained in the annex, this framework also incorporates the dynamics of the oil fund assets and consequently, an oil fund rule to deal with the large but volatile oil revenue in Russia. In Figure 19, we present results of fiscal sustainability analysis for the fiscal strategies outlined in the previous section. The diagram shows the net debt to GDP ratio, including the Oil Stabilization Fund stock as a negative item, under the various spending programs. The starting point is a negative number: the Oil Fund and other foreign exchange assets exceed the gross public debt by a substantial margin reflecting Russia's de facto *net creditor* position.

Figure 19. Stress tests for Net Debt-to-GDP



Source: world bank staff calculations.

Figure 20. Average oil price in 2008$



Under the baseline "after crisis" scenario reflecting **fiscal strategy with no explicit fiscal adjustment (passive scenario),** Russia saves and dissaves at the same time: resources are added to the oil fund but at the same time the transfers from the fund, by assumption equal to the PI equivalent, are *not* enough to cover the non-oil primary fiscal deficit, so gross debt is increasing as a percentage of GDP and Russia becomes a debtor already in 2011. Under this scenario, social spending pressures (elaborated in previous notes on long-term expenditures) result in a 4 percentage points higher expenditure to GDP ratio, and corresponding non-oil primary deficits, without offsetting cuts in other expenditures or revenue gains. The net result is that net debt decreases further for the first three years, but after that oil savings are insufficient to make up for the deficits after transfers from the oil fund, so net debt starts growing again. ***At the end of the planning horizon in 2040, Russia has eaten up its oil fund assets and other foreign exchange assets it started out with, and reaches a net debt position of around 80 percent of GDP***.

Under the "ideal," **Permanent Income rule (PI) scenario**, sustainability is, of course, not under threat; the net debt position remains basically unchanged over the planning horizon. Initial net saving are positive as oil revenues exceed the PI transfer and an *nopd* that exactly matches the PI transfer; later on net savings stop but the overall net debt position remains essentially stable. But the point is that the extraordinary scale of the global crisis and its impact non Russia (presumably an extremely rare event) has made the application of this rule impossible in the short- to medium-term but is shown here as an ideal to strive for in medium to long-term. Good news is that Russia's public debt is very low even after the crisis and the country has room to borrow in the next several years, thereby making the above-the-line fiscal adjustment less painful than it otherwise would be.

Under the **temporary fiscal adjustment scenario,** over a three-year period, social spending pressures resume, resulting in a 4-percentage points higher expenditure to GDP ratio, and corresponding non-oil primary deficits, without offsetting cuts in other expenditures or revenue gains. The net asset position continues to deteriorate after 2021. After that date, Russia is a net debtor again, to reach a net debt of 60 percent by 2040, a deterioration of no less than 60 percentage points of GDP. The upshot: temporary adjustment is a temporary palliative and does not fundamentally improve the country's long term fiscal position.

Finally, under the "permanent" or **sustained fiscal adjustment scenario—a preferred policy scenario--**over a longer period of five years including keeping long-term expenditures of the consolidated government at relatively low levels of 31.5 percent of GDP, fiscal adjustment delivers long-term fiscal improvements. Under this scenario, the inevitable, long-term increases in social spending pressures are offset by cuts in other expenditures and/or increase in expenditure efficiency on the expenditure side as well as expansion of the tax based and government revenues. As a result, Russia's net debt position improves on a long term basis and Russia is able to maintain its net creditor position in the long term. Implementing this adjustment, however, requires sustained, coordinated actions on revenue, expenditure and financing fronts as well as improvements in the effectiveness of public expenditures over time.

All scenarios are run under the assumption where oil prices fall back to about $60 per barrel, but remain constant in real terms thereafter, in line with the current assumptions made by the Government and oil experts.

Three final observations. First, while Russia's past fiscal prudence has helped limit the impact of the global crisis, there is no room for complacency. Russia's last decade of prosperity was partly built on sound fiscal policy and strong macroeconomic performance. Now is the time to effect important fiscal adjustment and lock in that performance for future generations so that they, too, may enjoy the fruits of stability and share in the benefits of oil assets.

Second, the Permanent Income rule, if applied in Russia in the long run, would resolve the fiscal sustainability problem on a lasting basis. Because Russia is running much larger non-oil primary fiscal deficit than the sustainable Permanent Income level, formal move to this rule requires large fiscal adjustment, but its benefits would be substantial. To make it feasible, such sustained fiscal adjustment must be phased and sustained over several years.

Third, to make the permanent income rule operational, it would also be advisable to complement such a fiscal deficit strategy (non-oil deficits equal to the permanent income level of future oil revenues) with an operational *feedback or correction rule* that would guide changes in fiscal policy from year to year so that any excess over that target level of debt implied by PI rule would result in a reduction in non-oil primary deficit by a percentage of that excess. This should have a strong impact on confidence; while it does not affect the *average* spending level of the Government, it will greatly reduce the variance of debt outcomes and thereby lower any crisis expectations. Moreover, a firm and automatic application of this rule should translate in lower costs of debt servicing and lower volatility in the capital account.

VI. Conclusions

Just before the global crisis, Russia seems to have left its fiscal problems far behind. A glaring lack of fiscal sustainability was at the root of the crisis ten years ago, but high oil prices and a remarkably restrained fiscal policy since 1998 seem to have changed the policy landscape completely. Russia's government has turned into a substantial net

creditor, as a large part of the windfall gains on oil and gas exports have been saved. Arguably, sound fiscal policy has been a key policy contributor to the strong growth performance of the Russian economy up to the global crisis in 2008.

But the rise in non-oil deficit in 2007-08 and, more importantly, the massive impact of the global crisis in late 2008 and 2009 have dramatically altered Russia's economic and fiscal outlook. Unless fiscal policy in the future gradually returns to its sustainable path, Russia could again slide back into a debtor nation, any time between 2014 to 2040, depending on a particular scenario. Moreover, given the conservatively projected key external variables, such scenarios are not improbable. To prevent this from happening, Russia will need to implement significant fiscal adjustment in the next several years to reduce the non-oil primary deficit to long-term sustainable levels.

Russia will need to implement sustained fiscal adjustment in the coming years. This will require 2-3 percentage point of GDP in fiscal adjustment for about five years in addition to keeping total expenditure levels at a relatively low 31.5 percent of GDP, consistent with long-term social expenditure needs and requirements of long-term fiscal sustainability. The long-term, sustainable level of non-oil fiscal deficit is estimated at about 4.3 percent of GDP. With the 2009 actual non-oil fiscal deficit of about 14 percent of GDP, this implies significant and *sustained* fiscal adjustment over the medium term. This scale of adjustment is large but in the context of recovering economy and the fiscal revenues is feasible, but will need to be implemented and sustained against the resurgence of expenditure pressures in line with recovery of oil prices.

Both revenue and expenditure measures will be needed. On the revenue side, expanding the non-oil tax base will be key, including reducing exemptions and raising excise taxes (especially on tobacco and alcohol products) that are now below international norms. On the expenditure side, cutting unproductive expenditures, especially on the current side and prioritizing public investments, improving project selection and project implementation will be important. These measures will be important building blocks in improving the effectiveness of public expenditures, including better targeting of social expenditures. Additional fiscal rules may be required that will automatically ensure fiscal sustainability over the long term.

Following a period of adjustment, if Russia would restrain its long-term non-oil deficits to the permanent income (PI) equivalent of its oil revenues as proposed in this paper, its fiscal policy will return to long-term sustainable path. Under such policy, Russia's Government will remain a substantial net creditor in perpetuity if it adheres to the PI rules on non-oil deficits. Such a scenario would allow future generations to share in Russia's oil wealth and would reduce fiscal risks to low and manageable levels, the high volatility of oil prices notwithstanding. By contrast, without such a shift, substantial risks will remain, not just from the external environment but also from internal pressures. Moreover, it is possible to envisage that more than one shock cumulatively hits the economy at the same time, in which case the adverse debt dynamics would accelerate.

The expenditure needs of the social security system as well as a reduction in key non-oil taxes represent a major fiscal risk to all scenarios. Other, short-term risks exist too: a reduction in VAT rate (something that has been backed by considerable commercial lobby in Russia) that would reduce the effective tax rate by about 4 percentage points, for

example, without any compensating base expansion threatens to add at least 1.5 percentage point of GDP to the time path of non-oil deficits, once again threatening fiscal sustainability. If particularly adverse external developments are added, Russia could again experience difficult conditions and a scenario where oil prices return to their long term historical average of $35 (in 2008 dollars) and net debt-to-GDP ratios quickly move into triple digit territory.

Other, less immediate risks exist. The pre-crisis policy of resisting nominal appreciation while expanding spending programs results in both high domestic interest rates and expectations of currency appreciation. This has resulted in strong incentives for commercial banks to take on foreign exchange risk by borrowing in dollars or Euros and lending in rubles, a scenario that may weaken the banking system if the exchange rate falls rather than rises in the future. This is not an impossible scenario although Russia managed the economic crisis well. This policy has, indeed, improved during the crisis towards more active use of interest rates and more flexible exchange rate policy; it will be important to maintain it in the future.

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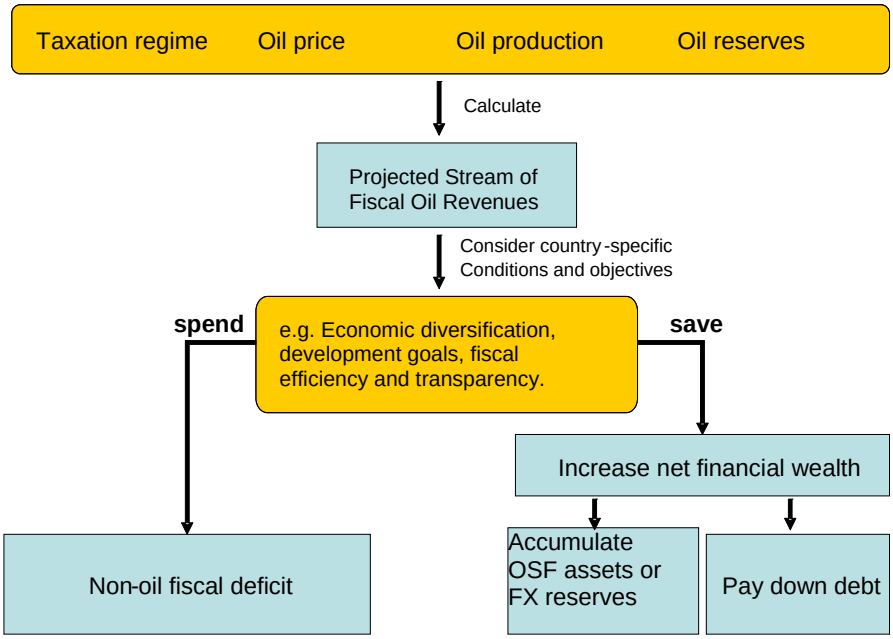
ANNEX I: The Fiscal Sustainability Tool[8]

The model utilizes simulation methods to forecast the distribution and evolution of net public debt/assets, accounting for various rules governing oil fund allocations, the non-oil primary deficit and foreign debt accumulation. It consolidates the government's fiscal accounts with the Oil Stabilization Fund (like for example Norway's Oil Fund)[9] and the central bank's foreign-currency reserves. Fiscal policy is captured by restrictions on the size of the non-oil primary deficit (NOPD) of the public sector plus the rule for allocating current oil revenues from the OSF to the budget. Fiscal sustainability analysis then means examining the impact of the non-oil primary fiscal deficit and OSF allocation rules on net debt levels, including monies saved in the OSF under various scenarios for the oil price.Moreover, it allows for explicit analysis of the effects of uncertainty not just through scenario analysis but also through full stochastic analysis allowing Value-at-Risk assessments. A schematic of the proposed framework is shown in Figure ANNEX II.1.

Figure ANNEX II.1.Fiscal Sustainability Framework for Oil-Rich Countries



[8] For a full description cf Bandiera e.a., 2007.

[9] Although we refer to oil, any other natural resource can be substituted, like Chile's Copper Stabilization Fund.